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Federal Communications Commission
Office of the Secretary

January 23, 1988

Ms. Donna R. Searcy
Mass Media Bureau
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

RE: MM Docket No. 87-268

Dear Ms. Searcy:

Transmitted herewith on behalf of Tele-Communications, Inc. are an original and five (5) copies of its Reply Comments in the above-referenced matter.

Should you have any questions, please contact the undersigned.

Very truly yours,

James E. Meyers

James E. Meyers
Counsel for
TELE-COMMUNICATIONS, INC.

JEM:btc:TCI
Enclosures

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Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of:	)	
	)	MM DOCKET NO. 87-268
Advanced Television Systems and Their Impact on the Existing Television Broadcast Service	)	
Review of Technical and Operational Requirements Part 73-E, Television Broadcast Stations	)	
Reevaluation of the UHF Television Channel and Distance Separation Requirements of Part 73 of the Commission's Rules	)	

REPLY COMMENTS OF TELE-COMMUNICATIONS, INC.

Tele-Communications, Inc. ("TCI"), through undersigned counsel, submits its reply comments regarding the Tentative Decision and Further Notice of Inquiry, FCC 88-288, released September 1, 1988 ("Tentative Decision").

In its comments, TCI advanced a scenario for an evolutionary approach to Advanced Television Systems ("ATV") that it expects ultimately to result in a significantly better ATV system than any of the analogue systems proposed to the Commission. Indications are that forces already have been set in motion that will rapidly advance video technology considerably beyond the state of the art of those proposed systems. The United States only now is awakening to ATV and its importance to the national interest, with resources only

now being marshalled.[1] At this delicate juncture, it would be premature for the Commission to succumb to expediency by approving a standard based on the high definition television ("HDTV") proposals under consideration. Rather, an enhanced definition television[2] interim solution would seem best suited to preserve the present technological infrastructure, offering the home video consumer a high quality picture beyond what is currently available over television, until the next significantly improved generation of technology is developed. A 6 mHz NTSC compatible interim standard would achieve this desirable result.

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[1]In its Comments TCI alluded to plans of the National Aeronautics and Space Administration to develop a digital high-definition television system by 1996 as a baseline for the video system of its space program. See TCI Comments, Attachment 1, at 10. See also "NASA Intends to Develop HDTV System," Multi-channel News (October 24, 1988) at 39. TCI also noted the forceful interest taken by the House Telecommunications and Finance Subcommittee in assuring rapid development of ATV. Comments of TCI at 2 n.1. After the comments to the Tentative Decision were filed, the Defense Advanced Research Projects Agency of the Department of Defense announced its plans to finance the development of an advanced high-resolution video display screen and has established February 13, 1989 as the deadline for proposals under which it will grant up to $30 million to companies now developing HDTV screens and video display processors. See The Washington Post (December 19, 1988) at A-1, A-10. See also Broadcasting (January 9, 1989) at 77. The National Telecommunications and Information Administration likewise has become involved, initiating an inquiry to reconsider the entire question of whether the United States should continue to support HDTV production standards. 53 Fed. Reg. 51296 (December 21, 1988). Concern has been formally expressed within the Department of Commerce with the importance of ATV to United States competitiveness. Report of the Advisory Committee on Advanced Television to the Secretary of Commerce (January 1989).

[2]By enhanced definition television is meant the proposals the Commission generally considers "EDTV" that are NTSC compatible and require no more than 6 mHz bandwidth. This would include improvements to the NTSC signal that require no changes to the NTSC format, as being conducted by Faroudja Laboratories. See Tentative Decision at 4 n.1, 15-18.

In the context of an interim 6 mHz NTSC compatible standard, TCI agrees with those commenters that there should be further testing before adopting an interim standard that requires any changes to the existing NTSC format. See, e.g., Comments of ABC/Capital Cities, Inc. at 4-5; Comments of the National Association of Broadcasters at 12-13. Any enhancements to the NTSC system need thorough testing for their robustness and durability under the vagaries of real-world signal propagation including distribution over cable television facilities. See Comments of National Cable Television Association ("NCTA") at 4-10.[3]

While TCI believes that consumers will be well served in the immediate future by compatible NTSC improvements, we also encourage the FCC to support extensive field tests of proposed HDTV systems involving both direct off-air reception and cable retransmission. This testing must be complemented with intense consumer testing. Psychophysical data must be obtained to support consumer demand and

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[3]In concluding that interim 6 mHz NTSC-compatible ATV is a correct solution, TCI was and is concerned with robustness of the enhanced broadcast signal when retransmitted over cable television facilities. Subject to further testing, HDTV and EDTV systems within 6 mHz do not appear sufficiently rugged for quality cable retransmission where enhancement depends upon introduction of additional intelligence into the NTSC signal. TCI's tests with the SuperNTSC system of Faroudja Laboratories preliminarily have not indicated a potential problem with robustness. TCI remains supportive of the Faroudja approach noting that the SuperNTSC signal was recently transmitted through the French Telecom IA satellite with a 100 percent positive result. The SuperNTSC has also been favorably considered in Japan for EDTV studio use through Faroudja's licensee, Ikegami.

satisfaction with whatever standard is adopted.[4] There is a rich body of empirical and theoretical knowledge in NTSC that can be drawn upon to solve testing problems as they occur. This tradition simply does not exist for the non-NTSC compatible proposals. The wisdom of adding to the existing knowledge base, particularly for interim purposes, seems evident and properly would focus efforts during the interim solution away from other current-generation noncompatible approaches. In this regard, to not require NTSC compatibility during an interim period would dissipate focus from developing the next-generation technology and could lead to a premature phase out of NTSC before interoperable optimum technology becomes available.

TCI does not rule out a marketplace solution among next generation HDTV technologies, but disagrees with the Federal Trade Commission's ("FTC") contention that required NTSC compatibility during the interim is contrary to the future public interest. See Comments of the Staff of the Bureau of Economics of the Federal Trade Commission at 21-22.[5] In his November 19, 1986 report to the

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[4]Until consumer-priced large displays compatible to the home environment are available, TCI doubts that consumer demand will support the high costs imposed by the HDTV proposals under consideration, particularly in light of the rivaling quality of EDTV. See, e.g., Archer S. Taylor, "High-definition TV--When?" Communications Technology (January 1989) at 122. See also The Wall Street Journal (January 20, 1989) at B1.

[5]In its Comments, TCI articulated its reasons, largely public policy, for not allocating additional spectrum, contrary to the FTC's suggestion that spectrum be auctioned at market. Moreover, in light of its perception that a 6 mHz channel is the preferred option, TCI did not reach the consideration of signal robustness under the augmentation channel approaches, although augmentation channels would probably be less likely to present robustness

National Science Foundation on compatibility standards in the broadcasting industry, upon which the FTC substantially relied, Samuel Besen identified the key question confronting the Commission in the specific context of HDTV: "Whether the technologies eventually adopted will lead to an overall system whose components fit together well." Besen and Johnson, Compatibility Standards, Competition, and Innovation in the Broadcasting Industry, (Rand: November, 1986) at 125.

TCI believes that an HDTV transmission standard[6] that includes the broadcast industry is a worthy aspiration, one that is necessary if HDTV is to be truly interoperable with the various media, and one that can be achieved with minimal encouragement. In the meantime,

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difficulties for cable distribution as observed by the NCTA. See Comments of NCTA at 4-10.

[6]The quality of images delivered to the consumer under a desirable HDTV standard should be limited only by the human eye. As technology develops over the next thirty to forty years, the standard should not limit the images transfer process, which primarily is a function of display and digital technology. As delivery and processing technology improve and as display technology supports larger higher resolution displays, the HDTV standard must support delivery by broadcast and cable of the superior images to the consumer. TCI believes that the technology will be digital HDTV.

the consuming public will be allowed to immediately enjoy a significantly improved level of picture quality through enhancements under the current standard.

Respectfully submitted,

TELE-COMMUNICATIONS, INC.

By: _____
B. Jay Baraff

By: _____
James E. Meyers
Its Counsel

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